Installation and first results from a remote-controlled automatic FTIR spectrometer on Stromboli

La Spina, A.[1,2], Burton, M.R [2]. Harig, R.[3], Caltabiano, T.[2], Giammanco, S.[2], Murè, F.[2]

[1] CFTA-Palermo University
[2] Istituto Nazionale di Geofisica e Vulcanologia, Catania, Italy
[3] TU Hamburg-Harburg, Hamburg, Germany

The first successful FTIR measurements on Stromboli were conducted in 2000, producing remarkable insights into the rapidly changing dynamics of degassing and explosive processes. The ability of the FTIR to simultaneously measure all the major species contained in volcanic gas emissions (H2O, CO2, SO2, HCl, HF, CO, OCS, SiF4) at high temporal resolution, when combined with the automatic SO2 flux monitoring system already installed on Stromboli could allow fluxes of all these gases to be determined accurately and automatically. In order to achieve this objective, we have designed a remotely controlled FTIR-scanner system that allows directional control over the field of view of the spectrometer. The system is planned for installation in June/July 2008, and we will present the first results from the system in this paper.